referred for PFO closure between Oct. 2006 and july 2011 in the Toulouse Rangueil universitary hospital. Follow-up data were available in May 2012.

Results: At baseline, all patients had dyspnea (58.3% NYHA 4). Eight patients (33.3%) had a history of stroke attack. POS was related to right pneumonectomy in 3 patients (12.5%), ascending aortic ectasy in 11 patients (45.8%), hepato-renal polycystic disease in 2 patients (8.3%). Aneurysm of the inter-atrial septum was observed in 12 patients (50%). PaO2 was lower in erect position compared to recumbent position (50.4±6.8 versus 72.6±12.5 mmHg, p=0.0005). Closure of the PFO was performed percutaneously in 24 patients (100%). An additional surgical PFO closure was necessary in 1 patient because of significant residual shunting. PaO2 in erect position was significantly increased after closure (p=0.0254).

During follow-up, 4 patients (16.7%, p=0.125) had a complete relief of their symptoms after closure. Dyspnea was significantly improved according to NYHA functional class (p=0.023). General status improved in 75% patients (p=0.025). Eight patients died (33.3%). Four deaths (50%) were related to stroke attacks at respectively 18 days, 3,11 and 39 months after PFO closure. Four deaths were not related to cardiac issue.

Conclusion: Patients referred for PFO closure for POS are old and at high risk of mortality, particularly from stroke attacks. PFO closure is associated with an improvement of the functional NYHA class and of the general status.

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Balloon aortic valvuloplasty can it be performed safely without heparin?

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Bleeding and femoral access complications which occurred after balloon aortic valvuloplasty (BAV) may be enhanced by the systematic use of heparin during the procedure. We assessed the hypothesis that BAV performed without heparin may be associated with lower complications rates.

Methods: We conducted a retrospective analysis of all consecutive patients who had undergone BAV in our center between 2008 and 2011. We evaluated 3 groups: group 1 included patients whose BAV was performed with large sheaths (10 to 12 F) and use of unfractionated heparin (UH) (50IU/kg bolus IV); patients whose BAV was performed with use of smaller size sheaths (8 or 9 F) who were divided into group 2 (with UH bolus) and group 3 (without UH bolus). We collected all major in-hospital adverse events, bleeding (≥BARC 3), vascular complications (including pseudoaneurysm or arterio venous fistula) and acute limb ischemia.

Results: Overall, 132 patients were included in this study. The 3 groups had similar median age (84 years) or previous lower extremity artery disease (overall n= 36, 27%, p=0.79). Vascular and bleeding complications were observed in 17 patients (12.8%) and were significantly higher when UH was used (table 1) with a relative risk of 2.89 (1.18-6.1). Conversely, absence of heparin did not increase ischemic complications or major in-hospital adverse events (p=0.5). Vascular complications were similar among patients who received heparin whatever the size of the used sheath (table 1).

Conclusion: Balloon aortic valvuloplasty performed without heparin appears to be safe and is associated with a dramatic reduction of vascular and bleeding events. Although randomization was not used, this marked difference is difficult to explain by confounding factors.

Table 1 – Vascular and bleeding complications

	group 1 (UH+, LS) n=23	group 2 (UH+, SS) n=46	group 3 (UH-, SS) n=63	p value
Femoral access and/or bleeding n=17 (12.8%)	4 (17.3%)	9 (19.5.%)	4 (6.3%)*	0.007
Bleeding n=15 (11.3%)	4 (17.3%)	8 (17.3%)	3 (4.7%)*	0.004
Acute limb ischemia n=4 (2.2%)	0	2 (4.3%)	2 (3.1%)	0.82

UH+: unfractionated heparin bolus 50 ui/kg; UH-: no heparin bolus; LS: large sheath; SS: small sheath

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The incidence, risk factors and prognosis of acute kidney injury (AKI) according to the valve academic research consortium (VARC) definition after transcatheter aortic valve implantation (TAVI)

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Background: Few data are currently available about patients characteristics and procedural features associated with AKI after TAVI using the new recommended VARC definition.

Methods: 99 patients underwent TAVI (1 procedural death, 78.8% transfemoral, 12.1% trans-apical/aortic and 9.1% subclavian access) between February 2009 and September 2011 at Rennes university hospital. Creatinine level was assessed daily at least up to 72 hours after TAVI. Patients' characteristics, procedural features and outcomes according to VARC definitions were studied to evaluate determinants and prognostic impact of AKI.

Results: AKI occurred in 22 patients (22.2%). Among them, 5 were AKI 2 (5.1%), 8 were AKI 3 (9.1%) including 4 who needed dialysis (4%). At baseline, compared to no AKI or AKI 1, AKI 2 or 3 patients had a higher prevalence of moderate or severe chronic kidney disease (p=0.046) and ≥ grade 2 mitral regurgitation (p=0.03). During the post TAVI hospitalization, AKI 2 or 3 was associated to a higher rate of death from any cause (p=0.0009), major bleeding, acute heart failure (both p=0.002), infectious complications (p=0.0008) and longer total and ICU hospitalization duration (p=0.0004 and <0.0001 respectively). AKI 2 or 3 patients had a higher rate of 30-days and 6 months death from any cause (p=0.005 and p=0.0002 respectively) but only because of the deaths occurring during the initial hospitalization. Only AKI 3 was associated with a higher risk of 6-months NYHA class III or IV (p=0.016).

Conclusion: AKI 2 or 3 as defined by the VARC criteria were associated with a higher risk of post procedural death because of their association with other major post procedural complications. AKI 3 was associated with a higher risk of short term worse functional outcomes.

	No AKI or AKI 1 N= 85	AKI 2 or 3 N=13	p value
Age-yr	79.0 ±10.2	80.5±6.7	0.63
Logistic EuroSCORE	19.8±12.2	19.3±10.2	0.89
Left ventricular ejection fraction-%	48.2±14.4	58.1±12.5	0.02
Aortic valve area-cm²	0.68±0.15	0.71±0.22	0.56

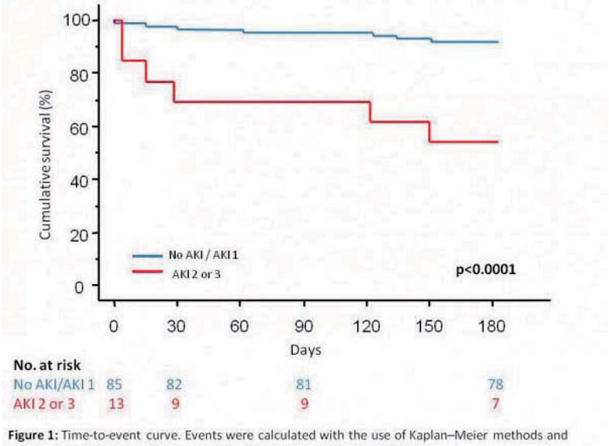

Figure 1: Time-to-event curve. Events were calculated with the use of Kaplan–Meier methods and compared with the use of a logrank test. AKI denotes acute kidney injury.

Figure 1: Time-to-event curv